DHR-SB3106
7/17/05

Department of Health and Human Services

Safety and Health Program

Indoor Air Quality Inspection Protocol

Building Name			
Ventilation Area Description			
Date of Initial Survey			
Determine Threshold number for ventilation area	▨	Total number of persons in ventilation area	
	▨	20% of total number of persons (Threshold Number)	
Inspect the Ventilation area. Check the items/conditions found *Obtain MSDS		1 Blocked ventilation vents	
		2 High concentrations of insect husks, bird droppings, etc.	
		3 Dried out floor drains	
		4 Visible fungal infestation	
		5 Water damage to or damp ceilings, walls, carpet, upholstery, etc.	
		6 Combustion processes	
		7 Welding	
		8 Improperly vented gas-fired furnaces and water heaters	
		9 Improperly vented gasoline or kerosene appliances	
		10 Copy machines in enclosed rooms or badly ventilated area	
		11 Microfilm equipment with heavy use	
		12 X-Ray processing equipment*	
		13 Pesticide/Insecticide use*	
		14 New structural renovation (<3 months)	
		15 Newly installed carpet (<3 months)	
Inspect the HVAC exterior fresh air intakes. Check the items/conditions found		16 Proximity of heavy vehicular traffic or idling for extended periods	
		17 Bare dirt or excessive plant life within 5 feet of intakes	
		18 Dirt, dust, etc. in intake	
		19 Smoking area within 5 feet of intakes	
Inspect each complaint area. Check if conditions exist in any of them, and list number of areas with the condition.		A. Outside Air Temperature	
		B. Outside Humidity	
		C Carbon dioxide concentrations exceeding 1000 ppm	
		D Temperature outside 68 - 76° F Range	
		E. Humidity outside 20-60% Range	
		F Inadequate cubic feet per minute of outdoor air	
		G. Other conditions needing correction	
Conduct interview of complainant(s) and of all persons indicated to have similar symptoms. List the number of persons with each symptom (including any other complaint within past three months). Check if number of complaints exceeds threshold number		a. Allergic reactions	
		b. Chest Tightness	
		c. Chills	
		d. Coughing	
		e. Difficulty Concentrating	
		f. Dizziness	
		g. Drowsiness	
		h. Eye/nose/throat/respiratory irritation	
		i. Fatigue	
		j. Fever	
		k. Headache	
		l. Increased respiration rate	
		m. Muscle pain	
		n. Nausea	
		o. Sensitivity to odors	
		p. Skin rash	
Notes:			

Indoor Air Quality Protocol: Ventilation Area

Match conditions (1-19) and symptoms (a-q.) Check potential chemical sources		Potential Source	Conditions	Symptoms
		I. Acetic Acid (10 ppm)	12, 14	j
		II. Carbon Dioxide (5000 ppm)	1, 6-9	f, h, m
		III. Carbon Monoxide (35 ppm)	6-9, 16, 19	g, l, o
		IV. Formaldehyde (0.5 ppm)	6, 14, 15, 19	a, i, p, q
		V. Nitrogen Oxides	7, 8, 9, 16, 19	i
		VI. Ozone (0.1 ppm)	10	i
		VII. VOCs	3, 6, 10, 13, 14, 16	g, i, j, l, o
		VIII. Organic Gases	6, 11, 19	i
		IX. Microorganisms/Microbials	2, 4, 5, 17, 18	a, b, c, d, e, k, l, n, o
X. Compare symptoms to MSDS for cleaning chemicals and pesticides used in area. Check and list matches				
E. Describe any other conditions observed. Check if corrective actions should be taken, and describe those actions.				

Corrective Actions based on identified deficiencies		
ASHRAE (A-D)		Correct conditions to meet ASHRAE specifications
Chemical Sources (I – VI)		Test for actual level of source
		Develop plan of action if above PEL
VOC/organic gases (VII-VIII)		Determine which VOCs/gases are present and their source
		Test for actual level of identified VOCs
		Develop plan of action if above PEL to reduce concentrations
Microorganisms (4, IX)		Repair and eliminate moisture sources
		Disinfect and Clean
MSDS Substances (X)		Develop plan of action, i.e. PPE, substitution, barriers, schedule, etc
Other Actions (E)		Perform corrective actions.

____.

Signature of Assessor

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Department of Health and Human Services
Safety and Health Program
Indoor Air Quality Survey
Employee Questionnaire

1. Identification	Building	
	Ventilation Area	
	Complaint Area	
2. Employee	Name	
	Job Title	
	Time in Complaint Area	
3. Date		

4. Where do you spend the largest part of your time in the building?	

5. What kind of symptoms are your experiencing? List when they started, when and where they are at their worst, and if they go away.

Symptom	**Date Began**	**When they are at their worst**		**When/Where they go away**	**Medical Care?**	
		Time	Place		Yes	No

6. Have you noticed any other events (weather, temperature, humidity, building activities) that tend to occur at the same time as your symptoms? Please list.	

7. Do you have any of the following conditions that may make you particularly susceptible to environmental problems?		Contact Lenses
		Allergies
		Any cardiovascular disease
		Any respiratory disease
		Any neurological problems
		Immune system suppressed
		Smoking

8. Do you have any observations about the building that might need attention or help explain your symptoms? (temperature, humidity, drafts, odors, etc.)	

9. Do you know any other employees experiencing the same symptoms?	

Indoor Air Quality Protocol: Employee Interview

Is there any other information you wish to provide concerning the quality of indoor air in this building?

Please read the statement below and sign and date if you are in agreement with it.	
I understand that the information I have provided on the reverse side of this document is for the purpose of evaluating the indoor air quality of my building only. I understand that this information will be included in the final report of this assessment, which will be made available to the safety professionals of the Department and my Division/Institution and to members of my direct chain of command..	
Employee's Name (Signature)	Date

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Department of Health and Human Services
Safety and Health Program
Indoor Air Quality Survey
Complaint Area Survey

Identification		Building	
		Ventilation Area	
		Complaint Area	
		Survey Date	
Names of employees making complaints			
Measure complaint area. Check if outside acceptable range.		Carbon Dioxide Concentration (>1000 PPM Test cfm, OSHA Standard <5000 PPM)	
		Temperature: (68-76° F)	
		Humidity: (20% - 60%)	
Determine the **Necessary** cubic feet per minute of outdoor air in complaint area.		List number of persons in Complaint Area	
		Enter 15 if individual office or 20 if office area (cubicles)x	
		Multiply to determine **Necessary** cfm of outdoor air	
Determine the **Actual** CFM of outdoor air. Check if **Necessary** > **Actual**	☐	Enter **CFM** for complaint area (Block A on back)	
		Enter percent of outdoor air as decimal (0.20 if unknown)	
		Multiply to determine **Actual** CFM of outdoor air.	
List any other conditions observed. Check if corrective actions are needed, and describe those actions.	☐		

Indoor Air Quality Protocol: Complaint Area

CFM Measurements and Calculations
Measure at least one vent of different sizes

Length (ft.)		Width (ft.)		Area (ft^2)		Airspeed (LFM)		Airflow (CFM)		No. Vents		Total (CFM)
	x		=		x		=		x		=	
	x		=		x		=		x		=	
	x		=		x		=		x		=	
	x		=		x		=		x		=	
	x		=		x		=		x		=	
	x		=		x		=		x		=	
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	x		=		x		=		x		=	
	x		=		x		=		x		=	
Total CFM for Complaint Area											**A**	